PTO/SB/21 (08-03)
Approved for use through 08/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE work Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. **Application Number** 10/709,898 **TRANSMITTAL** Filing Date 06/04/2004 **FORM** First Named Inventor Cheng-Kuo Wang Art Unit (to be used for all correspondence after initial filing) **Examiner Name** Attorney Docket Number 3 MSCP0025USA Total Number of Pages in This Submission

				EN	CLOSU	RES	(Check all that a	apply)				
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CERTIFICATE OF TRANSMISSION/MAILING												
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FEE TRANSMIT

PTO/SB/17 (10-03)

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Date

10/709,898

Approved for use through 07/31/2006. OMB 0651-0030 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE noter the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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for FY 2004	Γ	Filing Date			06/04/2004		
Effective 10101/2003. Patent fees are subject to annual revision.		First Named Inventor			or Cheng-Kuo Wang		
	<u> </u>	Exam	iner Na	ame			
Applicant claims small entity status. See 37 CFR 1.27		Art Unit					
TOTAL AMOUNT OF PAYMENT (\$) 0.00		Attorney Docket No. MSCP0025USA					
METHOD OF PAYMENT (check all that apply)				FEE	CALCULATION (continued)		
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Deposit Account:		Entity					
Deposit Account 50-3105	Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description Fee Paid		
Account 50-3105 Number	1051	130	2051	65 5	Surcharge - late filing fee or oath		
Deposit Account North America Intellectual Property Corp.	1052	50	2052		Surcharge - late provisional filing fee or xver sheet		
Name The Director is authorized to: (check all that apply)	1053	130	1053		Non-English specification		
Charge fee(s) indicated below Credit any overpayments	1812	2,520	1812 2	2,520 F	or filing a request for ex parte reexamination		
Charge any additional fee(s) or any underpayment of fee(s)	1804	920*	1804	920* F	Requesting publication of SIR prior to Examiner action		
Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.	1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action		
FEE CALCULATION	1251	110	2251		Extension for reply within first month		
1. BASIC FILING FEE	1252	420	2252	210	Extension for reply within second month		
Large Entity Small Entity	1253	950	2253	475	Extension for reply within third month		
Fee Fee Fee Fee Description Fee Paid	1254	1,480	2254	740	Extension for reply within fourth month		
Code (\$) Code (\$) 1001 770 2001 385 Utility filing fee	1255	2,010	2255	1,005	Extension for reply within fifth month		
1002 340 2002 170 Design filing fee	1401	330	2401	165	Notice of Appeal		
1003 530 2003 265 Plant filing fee	1402	330	2402	165	Filing a brief in support of an appeal		
1004 770 2004 385 Reissue filing fee	1403	290	2403	145	Request for oral hearing		
1005 160 2005 80 Provisional filing fee	1451	1,510	1451	1,510	Petition to institute a public use proceeding		
SUBTOTAL (1) (\$) 0.00	1452	110	2452	55	Petition to revive - unavoidable		
2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE	1453	1,330	2453	665	Petition to revive - unintentional		
Fee from		1,330	2501		Utility issue fee (or reissue)		
Total Claims	1502		2502		Design issue fee		
Independent 3**-	1503 1460		2503 1460		Plant issue fee		
Claims -3 - L - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		_			Petitions to the Commissioner		
Large Entity Small Entity	1807	50	1807		Processing fee under 37 CFR 1.17(q)		
Fee Fee Fee Fee Description	1806		1806		Submission of Information Disclosure Stmt Recording each patent assignment per		
Code (\$) Code (\$) 1202 18 2202 9 Claims in excess of 20	8021	40	8021		property (times number of properties)		
1201 86 2201 43 Independent claims in excess of 3	1809	770	2809		Filing a submission after final rejection (37 CFR 1.129(a))		
1203 290 2203 145 Multiple dependent claim, if not paid	1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))		
1204 86 2204 43 ** Reissue independent claims over original patent	1801	770	2801	385	Request for Continued Examination (RCE)		
1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent	1802	900	1802	900	Request for expedited examination of a design application		
SUBTOTAL (2) (\$) 0.00	Other	r fee (sp	ecify) _				
**or number previously paid, if greater, For Reissues, see above	*Red	uced by	Basic F	iling Fe	e Paid SUBTOTAL (3) (\$) 0.00		
SUBMITTED BY					(Complete (if applicable))		
Name (Print/Time) Wington House Registration No. 44 500 Telephone 996290227350							

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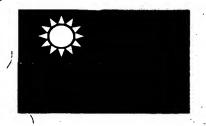
PTO/SB/02B (11-00)
Approved for use through 10/31/2002. OMB 0651-0032
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DECLARATION — Supplemental Priority Data Sheet

Additional foreign applications:							
Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES NO			
093103576	Taiwan R.O.C	02/13/2004					
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中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE MINISTRY OF ECONOMIC AFFAIRS REPUBLIC OF CHINA

茲證明所附文件,係本局存檔中原申請案的副本,正確無訛,其申請資料如下:

This is to certify that annexed is a true copy from the records of this office of the application as originally filed which is identified hereunder:

申 請 日: 西元 2004 年 02 月 13 日

Application Date

申 請 案 號: 093103576

Application No.

申 請 人; 微星科技股份有限公司

Applicant(s)

局

反

Director General



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西元 2004年 5 月 31 日

發文日期: Issue Date

`發文字號:

09320508020

Serial No.



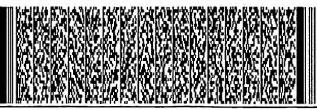


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申請日期:	IPC分類
申請案號:	



 		
(以上各欄	由本局填	發明專利說明書
_	中文	可遮蔽天線端子於無線網路卡上之焊接點之轉接器
發明名稱	英文	ADAPTER WHICH CAN SHIELD AN END OF AN ANTENNA TERMINAL WELDED ON A WIRELESS NETWORK CARD
	姓 名 (中文)	1. 王振國
=	姓 名 (英文)	1. WANG, CHEMG-KUO
發明人 (共2人)	國籍(中英文)	1. 中華民國 TW
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	住居所(英文)	1. No. 42, Alley 88, Lane 1200, Ming-Hu Rd., Hsin-Chu City 300, Taiwan, R.O.C.
	名稱或 姓 名 (中文)	1. 微星科技股份有限公司
	名稱或 姓 名 (英文)	1. MICRO-STAR INT'L CO., LTD.
=	國 籍 (中英文)	1. 中華民國 TW
申請人(共1人)	住居所 (營業所) (中 文)	
		1. No. 69, Li-Te St., Chung-Ho City, Taipei Hsien 235, Taiwan, R.O.C.
	代表人 (中文)	1. 徐祥
	代表人 (英文)	1. HSU, JOSEPH
	N. 150 C. 750	



申請日期:	IPC分類	
申請案號:		

(以上各欄)	由本局填電	發明專利說明書
_	中文	
發明名稱	英 文	
	姓 名 (中文)	2. 莫振雄
÷	姓 名 (英文)	2. MO, CHEN-HSIUNG
發明人 (共2人)	國 籍 (中英文)	2. 中華民國 TW
()(=)	住居所(中文)	2. 苗栗縣竹南鎮仁愛路二二0一巷五弄四十三號
	住居所 (英文)	2.No. 43, Alley 5, Lane 2201, Ren-Ai Rd., Chu-Nan Town, Miao- Li Hsien 350, Taiwan, R.O.C.
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	名稱或 姓 名 (英文)	
Ξ	國 籍 (中英文)	
申請人 (共1人)	住居所 (營業所) (中 文)	
	住居所 (營業所) (英 文)	
	代表人(中文)	
	代表人(英文)	



四、中文發明摘要 (發明名稱:可遮蔽天線端子於無線網路卡上之焊接點之轉接器)

一種可遮蔽天線端子於無線網路卡上之焊接點之轉接器,其包含一無線網路卡,以及一托架固定於該無線網路卡上。該托架包含一基板,其包含一孔洞用來設置一天線端子,以及一遮罩以遮蔽該孔洞之一側之方式連接於該基板,用來將該天線端子於該無線網路卡上之焊接點實質上遮蔽於該遮罩之內側。

五、英文發明摘要 (發明名稱:ADAPTER WHICH CAN SHIELD AN END OF AN ANTENNA TERMINAL WELDED ON A WIRELESS NETWORK CARD)

An adapter includes a wireless card, and a bracket fixed on the wireless card. The bracket includes a base plate that have a hole for positioning an antenna terminal, and a mask extended from the base plate for substantially shielding an end of the antenna terminal welded on the wireless card inside the mask.



六、指定代表圖

- (一)、本案代表圖為:第___ 四____ 圖
- (二)、本案代表圖之元件代表符號簡單說明:

30 無線網路卡

50 轉接器

62 基板

63 天線端子

64 孔洞

65 焊接點

66 固定座

68 遮罩



一、本案已向			
國家(地區)申請專利	申請日期	案號	主張專利法第二十四條第一項優先
		無	
二、□主張專利法第二十3	五條之一第一項優	先權:	
申請案號:		L	
日期:		無	
三、主張本案係符合專利法	去第二十條第一項	□第一款但書或□]第二款但書規定之期間
日期:			
四、□有關微生物已寄存為	冷國外 :		
寄存國家:		無	•
寄存機構: 寄存日期:		,	
寄存號碼:			
□有關微生物已寄存力 寄存機構:	於國內(本局所指第	〔乙奇仔機構):	
寄存日期:		無	
寄存號碼: □熟習該項技術者易力	办確復 不須宏方。		
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THE ECTIVE A STATE AND ADMINISTRATE.	·		

五、發明說明 (1)

【發明所屬之技術領域】

本發明提供一種轉接器,尤指一種可遮蔽天線端子於無線網路卡上之焊接點之轉接器。

【先前技術】

由於美國聯邦通訊委員會(The Federal Communications Commission, FCC)15.203中規定,802.11b與802.11g WLAN PCI Adapter需使用非標準接頭,因此,Reverse SMA 接頭被廣泛地應用在2.4GHZ頻帶的無線通信產品。但在802.11a的5.15-5.25 GHZ頻帶卻受限於FCC 15.407-d有關Unlicensed National Information Infrastructure (U-NII) devices規定:在此頻帶的產品,天線必須為產品的一部分。意即天線不可由使用者任意拆卸或更換,如不能遵守此一法規,此產品在IEEE 802.11a的5.15-5.25 GHZ頻帶必須關閉不可使用。目前市面上部份有關802.11a無線網路卡之轉接器就因使用RSMA接頭,無法遵守此一法規而關閉此一頻帶。而有些廠商卻為了遵守此一法規而使用一個相當大的遮蔽蓋,因此增加許多生產成本。

請參閱圖一及圖二,圖一及圖二為習知轉接器10之示意圖。轉接器10包含一無線網路卡30及一托架20。托





五、發明說明 (2)

架20包含一基板22,其具有一孔洞24,用來設置一天線端子25,以及二固定座26,延伸自基板22,用來將托架20固定於無線網路卡30上。天線端子25係藉由托架20之孔洞24設置於托架20之基板22,如圖二所示,使用者可經由此孔洞24任意拆卸天線25,故無法遵守FCC15.407-d法規,因此,轉接器10的設計使無線網路通信產品無法使用IEEE 802.11a之全頻段。

請參閱圖三,圖三為具有一遮蔽蓋46之無線網路卡30之轉接器40之示意圖。無線網路卡30上安裝有一迷你PCI(mini PCI)卡42,圖三中天線係透過一纜線44連接於一設置於迷你PCI卡42上之接頭43,為了遵守FCC15.407-d法規,接頭43必需隱藏於遮蔽蓋46之下,使用者無法任意拆卸天線,然而為了隱藏接頭43,習知的作法係使用一遮蔽蓋46將迷你PCI卡42整個遮蔽住,如此非常地浪費材料。另外,在生產時,由於迷你PCI卡42係遠離基板22,因此遮蔽蓋46係遠離基板22設置,如此纜線44必需長距離地由基板22拉到接頭,造成無線網路卡30上空間與材料的浪費,以及遮蔽蓋46難以直接由基板22延伸至迷你PCI卡42。

【發明內容】

本發明係提供一種可遮蔽天線端子於無線網路卡上





五、發明說明 (3)

之焊接點之轉接器,以解決上述之問題。

本發明係揭露一種轉接器,其包含一無線網路卡,以及一托架(bracket),固定於該無線網路卡上,該托架包含:一基板,其包含一孔洞,用來設置一天線端子;一遮罩,以遮蔽該孔洞之一側之方式連接於該基板,用來將該天線端子於該無線網路卡上之焊接點實質上遮蔽於該遮罩之內側。

【實施方式】

請參閱圖四,圖四為本發明轉接器50之示意圖。在本實施例中,習知迷你PCI卡42上之電路係一併佈線於無線網路卡30上,因此天線端子63係焊接於無線網路卡30上,而非迷你PCI卡42上。另,本實施例係為利用現有之托架60(bracket)加以修改,如圖四所示,以孔洞64為中心,產生一個方形之遮罩68,其可任意延伸涵蓋面積,用以遮蔽天線端子63於無線網路卡30上之焊接點65,以避免組裝時或使用時意外碰觸導致短路,如此,便可遵守FCC 15.407-d相關法規:「天線必須為產品的一部分。」並可防止使用者任意修改或更換天線時可能造成的傷害。

請參閱圖五,圖五為本發明之托架60之示意圖。托





五、發明說明 (4)

架60包含一基板62,其包含一孔洞64,用來設置天線端子63,一遮罩68以遮蔽孔洞64一側之方式延伸自基板62,用來將天線端子63於無線網路卡30上之焊接點65實質上遮蔽於遮罩68之內側,以及二固定座66,延伸自基板62,用來將托架60固定於無線網路卡30上。

請參閱圖六,圖六為本發明另一托架70之示意圖。 托架70與圖五之托架60不同處在於其遮罩78有複數個定位件77,可將托架70固定於無線網路卡30上,以使托架 70與無線網路卡30之組裝更為確實,亦可使用防撕貼紙 等以避免他人拆卸。

請參閱圖七與圖八為本發明之另二托架80、90之示意圖。托架80、90與圖六之托架70不同處在於遮罩88、98可空出一邊或兩邊,如圖七與圖八所不,以方便檢查人員可以直接以內眼檢視內部元件或焊接的狀況。圖七與圖八的托架80、90之遮罩88、98仍以遮蔽孔洞84、94之一側之方式延伸自基板82、92,用來將天線端子63與無線網路卡30上之焊接點65實質上遮蔽於遮罩88、98之內側,並可防止使用者任意修改或更換天線時可能造成的傷害。

相較於先前技術,圖一及圖二之天線端子可任意地由托架20上拆卸下來,因此轉接器10無法使用IEEE





五、發明說明 (5)

802.11a之全頻段。雖然圖三的接頭43已因遮蔽蓋46將迷你PCI卡42整個遮蔽住而可避免使用者任意拆卸,但使用遮蔽蓋46完全地遮蔽迷你PCI卡42非常的浪費成本,應用本發明之後,不但可使用IEEE 802.11a之全頻段以增加產品之競爭力,遮罩68、78、88、98僅需遮蔽無線網路卡30上焊接天線端子63之焊接點65之微小區域,而不用遮蔽整個迷你PCI卡42之區域,因此可降低遮罩68、78、88、98的成本,進而降低轉接器50之成本。另外,由於遮罩68、78、88、98係可以一體成形之方式由基板62、72、82、92及遮罩68、78、88、98一同安裝於無線網路卡30上,以生產滿足所有FCC Part15規範的IEEE 802.11a無線網路轉接器。

以上所述僅為本發明之較佳實施例凡依本發明申請專利範圍,所做之均等變化與修飾,皆應屬本發明專利的涵蓋範圍。





圖式簡單說明

圖式之簡單說明

圖一及圖二為習知轉接器之示意圖。

圖三為具有遮蔽蓋之無線網路卡之轉接器之示意圖。

圖四為本發明轉接器之示意圖。

圖五至圖八為本發明之四種相異托架之示意圖。

圖式之符號說明

3 0	無	線網	路卡	4 4	纜 線
10	· 40	· 50	轉接	器 46	遮蔽蓋
63	夭	線端	子	6 5	焊接點
20	• 60	· 70	. 80 . 9	90 扥	架
22	· 62	· 72	82 9	32 基	板
24	· 64	· 74	84 9	94 孔	洞
26	• 66	· 76	. 86 . 9	96 固	定座
68	· 78	· 88	98	遮	罩
77	· 87	• 97		定	位件



六、申請專利範圍

- 1. 一種可遮蔽天線端子於無線網路卡上之焊接點之轉接器,其包含:
 - 一無線網路卡; 以及
 - 一托架(bracket),固定於該無線網路卡上,該托架包含:
 - 一基板,其包含一孔洞,用來設置一天線端子;
 - 一遮罩,以遮蔽該孔洞一側之方式連接於該基板,用來將該天線端子於該無線網路卡上之焊接點實質上遮蔽於該遮罩之內側。
- 2. 如申請專利範圍第1項所述之轉接器,其中該托架另包含二固定座,延伸自該基板,用來將該托架固定於該無線網路卡上。
- 3. 如申請專利範圍第1項所述之轉接器,其中該遮罩係以一體成形之方式延伸自該基板。
- 4. 如申請專利範圍第1項所述之轉接器,其中該遮罩另包含一定位件,用來將該遮罩固定於該無線網路卡上。
- 5. 一種可遮蔽天線端子於無線網路卡上之焊接點之托架 (bracket),其包含:
 - 一基板,其包含一孔洞,用來設置一天線端子;
 - 一遮罩,以遮蔽該孔洞一側之方式連接於該基板,



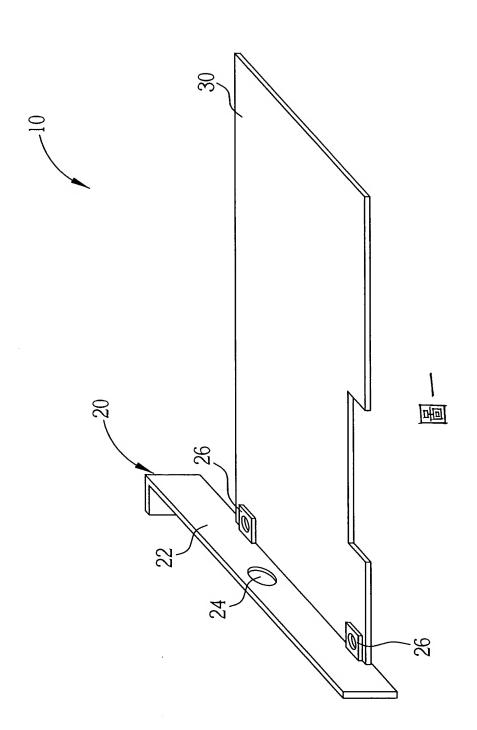
六、申請專利範圍

用來將該天線端子於一無線網路卡上之焊接點實 質上遮蔽於該遮罩之內側。



- 6. 如申請專利範圍第5項所述之托架,其另包含二固定 座,延伸自該基板,用來將該托架固定於該無線網路 卡上。
- 7. 如申請專利範圍第5項所述之托架,其中該遮罩係以一 體成形之方式延伸自該基板。
- 8. 如申請專利範圍第5項所述之托架,其中該遮罩另包含 一定位件,用來將該遮罩固定於該無線網路卡上。

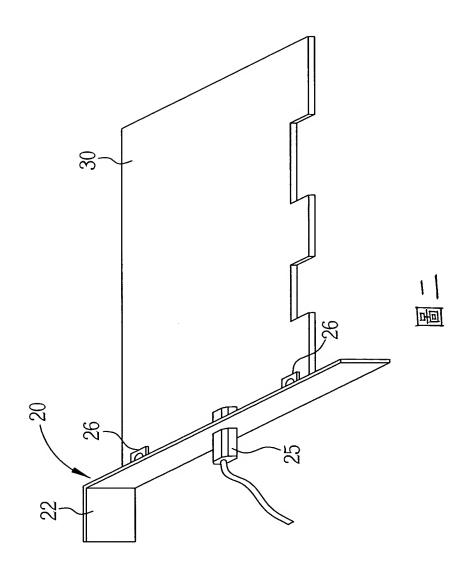


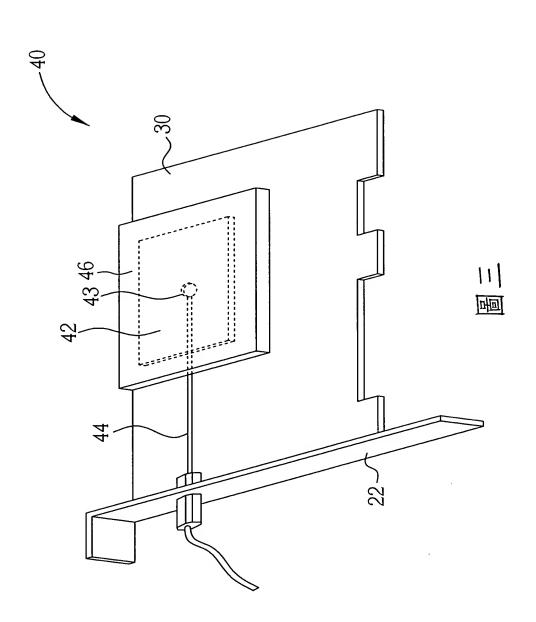


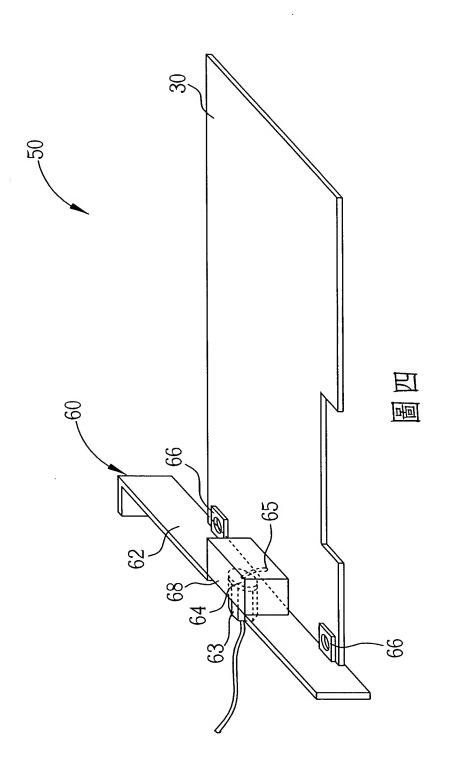
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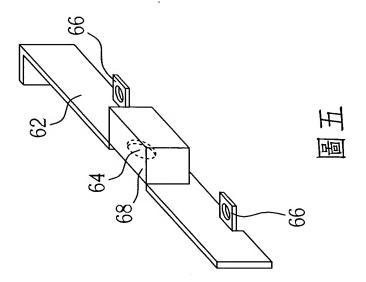


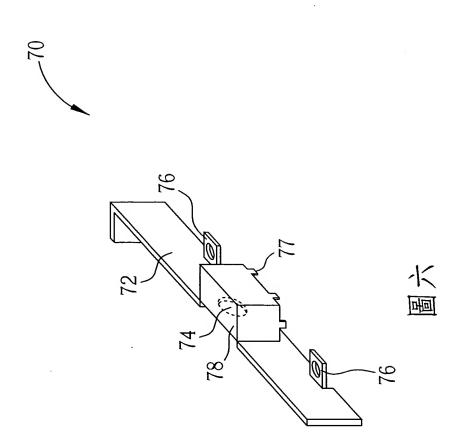


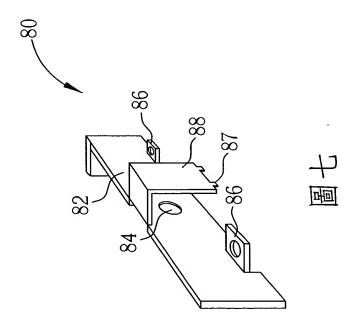


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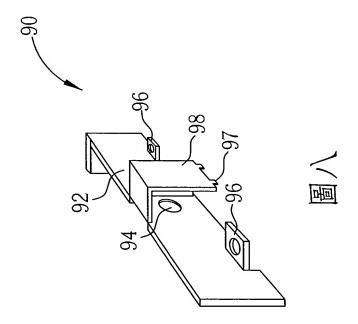






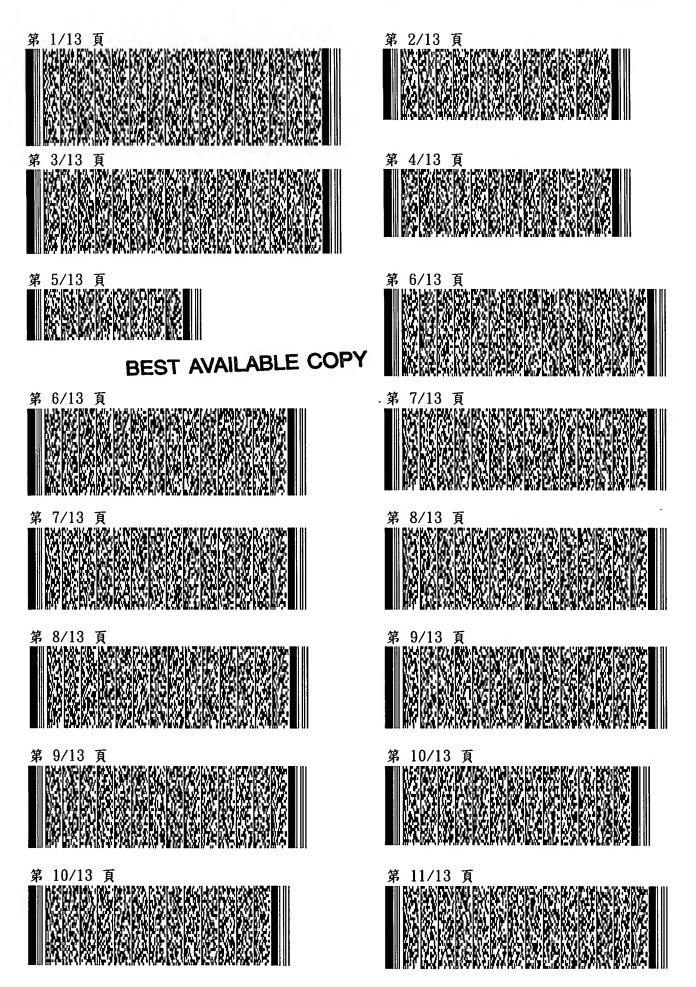


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(4.7版)申請案件名稱:可遮蔽天線端子於無線網路卡上之焊接點之轉接器





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